# A SYSTEM FOR BUILDING TOY STRUCTURES FROM DISCARDED OBJECTS

## FIELD OF THE INVENTION

The present invention relates generally to systems for enabling discarded objects to be reused as toys, and more particularly to a system of connectors, which would enable an individual to build toy structures composed of discarded objects such as bottles and cans.

## BACKGROUND OF THE INVENTION

U.S. patent 6,176,755 describes means for turning a single plastic bottle into a toy car. US patent 4,202,456 describes means for turning a plurality of bottle caps into a toy. US patent 5,361,919 describes means for turning a plurality of bottle caps into a toy.

The above patents relate to a single bottle or to clustered caps. Therefore, it would be desirable to provide a system enabling use of a plurality of discarded objects, such as bottles and beverage cans and the like, in construction of toy structures.

## SUMMARY OF THE INVENTION

Accordingly, it is a principal object of the present invention to overcome the disadvantages of the prior art and to provide a system comprising at least one connector provided with a connecting means enabling connection of the at least one connector to at least one connected element to form a structure comprising at least one discarded object.

Connected elements in the system, in a preferred embodiment of the invention, comprise discarded objects, for example, a plurality of empty bottles, and empty beverage cans connected together by using special adaptable connectors to form various toy structures having a variety of shapes and sizes that can be handled safely by children. The structures are amenable to construction varying from the simple to the complex, and in various combinations of stationary and mobile parts depending on the type of connectors used and the imagination of the child.

The aim of the invention is also to provide a form of children's entertainment and

an educational game, teaching children to turn discarded objects into interesting and useful structures while activating their motor skills and stimulating their imagination. The system nables complicated structures to be constructed from simple and inexpensive connectors and connected elements.

In particular, the invention uses lightweight empty plastic bottles with threaded necks, and empty aluminum cans from which the sharp covers have been removed for safety reasons. Some preparation of the cans and bottles for their utilization in the system calls for the assistance of an adult, such as to ensure the removal of the sharp cover from the empty can or, in some configurations of the invention, to permanently attach connectors to the bottle or the can, as will hereinafter be described in detail. Once these preparations have been completed, children can play efficiently and safely with the bottles, cans, and connectors while connecting them into numerous differently shaped structures.

For those who have access to computers, the system is associated with animated, solid-drawing software as is known to those skilled in the art which is user-friendly, comprising interactive, manual, semi-automatic or fully automatic operating modes, aided by artificial intelligence and many other relevant interfacing software means, also known to those skilled in the art, which enable easy, simple, and guided execution of design procedures, leading to animated solid presentation of complicated structures including easy, simple and guided methods of construction, while training and guiding the child to translate pictures into actual structures.

In some embodiments of the invention, the connectors comprise surfaces which enable, in some configurations, the printing or embedding of sponsor's logo, such as a soft drink manufacturer's logo, which then might subsidize the cost of the connectors by using them as advertising and marketing tools, further reducing the system cost to the end users.

In an alternative embodiment, serial numbers are printed or embedded on the connectors for identification and easy sorting, easing the communication between the children when several children jointly execute the construction. Alternatively, color-coding, alpha-numeric labeling, tactile differentiation, geometric differentiation, and/or other forms of identification can be used. The connectors may also be fabricated of

colored materials or painted to enhance their aesthetic appearance.

Other features and advantages of the invention will become apparent from the following drawings and descriptions.

## BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the invention in regard to the embodiments thereof, reference is made to the following drawings, not shown to scale, in which numerals designate corresponding sections or objects throughout, and in which:

Fig. 1A illustrates a top view and a detail of the system of the present invention;

Fig. 1B illustrates a top view of the connector of the system of Fig. 1A;

Fig. 1C illustrates a cross-sectional profile view and a detail view of the connector of Fig. 1B taken along the line 1-1;

Fig. 1D illustrates a top view of an alternative embodiment of the connector of Fig. 1A;

Fig. 1E illustrates a cross-sectional profile view of the connector of Fig. 1D taken along the line 1-1;

Fig. 1F illustrates a top view of a further alternative embodiment of the connector of Fig. 1A;

Fig. 1G illustrates a cross-sectional profile view of the connector of Fig. 1F taken along the line 1-1;

Figs. 2A-2E illustrate additional alternative embodiments of the connector of Fig. 1A;

Fig. 2F is a cross-section profile view illustrating an arrangement of rods on an elongated connector;

Fig. 2G is an end, cross-section view of the connector of Fig. 2F;

Fig. 2H is a cross-section view of the connector of Fig. 2F shown with rods rearranged;

Fig. 2I is a cross-section view of another embodiment of a connector;

Fig. 2J illustrates an arrangement of connected elements and connectors;

Fig. 2K-2L illustrate in cross-section views other embodiments of connectors;

Figs. 2M-2W illustrate various arrangements of connected elements and

connectors in accordance with the principles of the invention;

Figs. 3A-3C are cross-sections and detail views of other embodiments of the invention;

Figs. 4A and 4B are a cross-section profile view and a top view, respectively, of an alternative embodiment of a connector;

Figs. 5A and 5B are a cross-section profile view and a top view, respectively, of a board connector with various connected elements mounted thereon;

Figs. 6A and 6B are top and profile views of a further alternative embodiment of a connector;

Fig. 7 is a cross-section view of yet another embodiment of the invention; and

Figs. 8 to 10 illustrate various structures formed by use of the connectors and connected elements of the present invention.

## DETAILED DESCRIPTION OF THE INVENTION

The system of the present invention uses connectors provided with connection means to enable connection of connected elements, such as discarded objects in the form of bottles or cans, into a structure. A wide variety of connectors may be used, including rigid, *i.e.*, permanent or removable connectors; stationary or dynamic connectors, such as sliding or rotating connectors; and the like.

The term "connected elements" as used hereinafter generally refers to discarded objects such as empty bottles and empty cans which are connected into structures by the connectors. The connected elements, however, are not restricted only to discarded objects, as it is obvious that they may be provided from newly fabricated materials as well as from recycled materials or reusable objects. The connectors and connected elements after being connected into a structure of any type are hereinafter referred to as structure part(s) or structure element(s) or substructure.

The connecting means, in accordance with the principles of the invention, is adapted for attachment to at least one connected element. The connecting means is characterized as a member of at least one of the group: a threaded member; a member provided with coiled springs, the ends coils defining threads; a plurality of interconnected springs; a threaded bottle cap attached to said at least one connected element; a threaded

bottle cap attached to said at least one connector element, a member provided with non-threaded holes which enable a press-fit connection; a clip-type member; a slip-on type member; a grip type, an inflatable grip type member; and any combination thereof.

Some examples of these various embodiments of connecting means are described below in reference to the drawings. Others may now suggest themselves to those skilled in the art and it is not intended that the invention be limited to just these examples.

Wherever applicable, reference to the singular also refers to the plural.

In many applications two or more connectors are connected directly to each other randomly or in a specific pre-designed manner, using a connector which provides a plurality of connecting points and axes.

Elements which are not used as connectors, but are only connected to another connector, or to a connected element without any connecting function, such as, for example, a rotary disk which serves as the wheel of a wheelbarrow as described below, or as a steering wheel in a car, and the like, are referred to hereinafter as passive objects. Such connectors comprise at least a single connecting means.

The bottles and cans displayed in the drawings (not to scale) are shaped and sized randomly without limitation to any specific bottle shape and/or size.

Wherever reference is made to a thread it should be considered in broader terms as a connecting means. For example, when a can is utilized as a connected element the thread is replaced by a cylindrical groove that fits the can, preferably at a suitable sliding fit.

With reference to Figure 1A, a preferred embodiment of the system 10 of the present invention is shown.

System 10 comprises a plurality of bottles 12, each having a threaded neck 14, connected by a series of connectors 16.

Connector 16 is octagonal and formed with threaded cylindrical protrusions 18 extending from its faces. Up to five other bottles 12, of which three are displayed, having threaded necks 14 complementary to the threads of connector 16, are screwed into connector 16 by necks 14.

A second type of connector 20 is positioned on the base-end of bottle 12. Connector 20 is shaped as a hollow regular symmetric polyhedron, having an opening of

dimensions equivalent to that of the base of bottle 12. Connector 20 is preferably permanently press-fitted onto the base-of bottle 12 at sufficient holding friction or is permanently mounted on the base-end of bottle 12 after suitable adhesive is applied to the surfaces in contact with bottle 12 or by use of any other permanent attachment means as is known to those skilled in the art.

Connector 20 comprises, by way of example, four, threaded cylindrical protrusions 18 of which three are seen in fig. 1B. Each protrusion 18 is provided with a threaded opening for insertion therein of supports for the threaded neck 14 of a bottle 12. A connector 20 may be attached to the base end of each bottle 12 to enable the expansion of the structure displayed into a larger and more complicated structure of any shape, with open or interlocked ends.

The bottles 12 used can be of the same type or may be differently sized and shaped, providing connectors 16 and 20 are adapted to their dimensions.

Figs. 1B to 1G illustrate alternate embodiments of a connector. A connector includes at least one of the types: a board, an inflatable object, a rigid shaped object, a spring, a plurality of interconnected springs, a flexible object, an elastic object, a resilient object, threaded objects; and any combination thereof.

With reference to Figs. 1B and 1C, connector 20 is seen in top view and cross-section profile view, respectively.

The connecting points are protruding cylinders 18, each formed with a central opening 22 in upper face 24, having dimensions allowing insertion therein of the base of bottle 12. To prevent bottle 12 from sliding out of opening 22 of connector 20, the circumference of opening 22 may be provided with tooth 23 (see detail view) to retain bottle 12. Groove 26 is an option, aimed to ease the insertion of the base of bottle 12 within opening 22.

Other connectors which are more universal can be used, for example by utilizing a flexible connector which is stretched during assembly, while constructing and permanently fitting itself around the base end of bottle 12. Such connectors can be simply and easily reused by removing them from bottle 12 when the bottle becomes damaged beyond use.

The connectors 16 and 20 as well as those hereinafter illustrated are schematically

displayed with the aim of demonstrating their utilization and application within system 10 as well as other structures as are hereinafter displayed. It is clear that connectors 16 and 20 can be optimized, for example by minimizing their weight and manufacturing cost while preserving their functionality and ease of application. Such design improvements can be achieved by utilizing, for example, finite object software and similar calculation procedures and/or value engineering methods, and the like, as is known to those skilled in the art.

Fig. 1D displays connector 28, which is similar to connector 20 of Fig. 1B, but without lower protrusion 18b.

Fig. 1F displays a double connector 30, which enables bottles 12 to be connected base-to-base. Although not illustrated, it should be understood that all connectors described above with reference to bottles 12 can be also applied to beverage cans and the like.

Figures 2A to 2R illustrate further various embodiments of connectors.

Fig. 2A illustrates a hollow female-threaded element 32, threaded either along its whole length or, as illustrated, only at its ends 34. A groove 36 enables mounting of a snap ring 38 as shown in Fig. 2B.

Fig. 2C is a male-threaded hollow element 40, threaded either along its whole length or as displayed only at its ends.

In all embodiments, wherever applicable, connectors can be rigid or made from flexible or resilient material, or, when rod-shaped, they can be replaced by a spring with its windings adapted to be threaded into a female thread and/or onto a male thread.

In all embodiments wherever applicable a properly wound and sized spring can serve as a male or female threaded connector. Such a connector, due to its flexibility, enables connection of connectors and connected elements, in any desirable relative position into which the spring can be bent, compressed, or stretched.

The spring winding direction can also be changed at any point between the spring ends to provide left and right windings on the same spring that are adapted to the matching left and right threads.

When properly applied, the flexibility of the springy connector enables construction of flexible structures, which enable relative movements between the

structural objects. Depending upon the weight of the objects composing the structure and the effects of the spring counter-forces, the structure will be restored to its original equilibrium steady-state or will define a new equilibrium state different from that of the original.

Fig. 2D displays a hollow rod 42 with male thread 44 and female thread 46, each at different ends.

Rod 42 maybe rigid or made from flexible material, or as a spring with two diameters, with one end of the spring adapted to be threaded into female thread while the other end is adapted to be threaded on a male threads.

Fig. 2E displays a female-threaded connector 46 mounted on male-threaded connector 48. The threads are for example left and right. By rotating female-threaded connector 48, the distance between the ends 50 and 52 of the connector is changed in accordance with the direction of rotation, enabling the distance between connected elements or connectors to be adjusted while accurately adjusting the distance between the structure parts.

Fig. 2F is a cross-section profile view illustrating an arrangement of rods 54 on an elongated connector comprising a shaft 56. Shown is an example of three hollow male-threaded rods 54 mounted on a common shaft 56. The faces 58 around shaft 56 are provided with grooves 59 such that one set of grooves is pushed into the facing set when the butterfly nuts 60 are locked, fixing the position of rods 54 at a desired position. Any number of rods 54 with male- and female-threaded ends can be incorporated into such an embodiment.

Fig. 2G is an end, cross-section view of the connector of Fig. 2F.

Fig. 2H is a cross-section view of the connector of Fig. 2F shown with rods 54 rearranged.

Fig. 2I is a cross-section view of another embodiment of a connector.

Connector 62 with male-threaded end 64 and female-threaded end 66 is rotatably mounted on rod 67. The female-threaded end 66 is kept in place by the extended circumference 68. This embodiment enables threaded connection of each end to another connector or connected element without the need to rotate the other end.

Fig. 2J illustrates an arrangement of connected elements and connectors. Fig. 2J displays an example of a non-linear connector 70 composed of two sections, a rod 72 with male-threaded end 74 connected to another connector 76 and female-threaded end 78 connected to bottle 12. The spherical bearing 80 enables bottle 12 to be tilted within a conical section of a sphere and connection of bottle 12 to other connectors or connected elements at any desired angle within the conical section. A plurality of such connectors can be connected to a larger connector 76. The spherical bearing 80 can also be embedded directly into connector 76. It is clear that other connectors can be interconnected by spherical bearings 80 to provide more flexibility in connecting the connected elements.

Fig. 2K-2L illustrate in cross-section view other embodiments of connectors.

Fig 2K displays a bottle cap 82 press-fitted into connector housing 84 at high friction that keeps cap 82 tightly in place. Housing 84 is provided with a hole 86 and gap 90 to enable air to escape when cap 82 is tightly fitted into housing 84. As an option, conical shaped inlet 91 assists the user in directing the neck of the bottle into the threaded cap 82 as well as to any other female thread. It is clear that any of the female-threaded ends described in association with each of the relevant embodiments, can be either an integral part of the connector, or composed of a hollow hole that firmly and permanently houses a bottle cap at a suitable press fit or by utilizing other permanent attachment means as is known to those skilled in the art. Fig. 2L is an alternate embodiment of the invention of Fig. 2K.

Figs. 2M-2W illustrate various arrangements of connected elements and connectors in accordance with the principles of the invention;

Referring now to Figs. 2M and 2N, there are displayed a top and side views, respectively, of an example of an "L" connector 92 which enables connection of two bottles 12 at 90 degrees to each other. As an option, a third female-threaded protrusion 94 enables a third bottle 12 to be attached at 135 degrees to the other two bottles 12 with their symmetric axes disposed in the same plane.

Figs. 2P1 and 2P2 display in top and side views, respectively, an example of a "T" connector 100 which enables connection of three bottles 12 at 90 degrees to each other, with their symmetric axes disposed in the same plane. This embodiment of the

invention demonstrates an example of weight reduction of the connector.

Figs. 2Q and 2R display in top and side views, respectively, an example of a spatial "cross" connector 102 similar to the cubic connector 16 of Fig. 1A, which enables connection of six bottles 12 at 90 degrees to each other with their symmetric axes orthogonally disposed in different planes.

It is clear that any polyhedron, regular, irregular, symmetric or asymmetric can be utilized as a connector with each of its faces preferably comprising at least a single thread.

Figs. 2S-2U display various views of a connector 110 in the form of a sphere with male and/or female threads disposed on its face. Bottles 12 are mounted directly within the female threads or connected via connectors to male threads. The threads can be replaced by cylindrical grooves that house the base of a can. Other connectors, such as the connector from fig. 2H can be pivotally connected to connector 110 with the spherical bearing directly embedded into connector 110.

The connector 110 can be of any size that can carry the bottles and/or cans. It can be rigid, solid, hollow, flexible, or inflatable. The connector can be a regular polyhedron with any number of faces with each face preferably providing space for at least one thread, or can be of any shape, regular, symmetric, asymmetric or randomly shaped. The connector can be also of any shape that accurately represents or generally imitates, physically existing items or characters or virtually existing items or characters such as those displayed in comic magazines or cartoons, and from other media. The shape of the connector can be that of any imaginary object that can be physically materialized as a connector or as a passive element.

In general, each connector or passive element can be composed of a plurality of other elements, into a connector with a fixed shape or a changeable shape that can be secured at any desired position.

Fig 2V displays a connector 112 rotatably mounted on a connector 114, secured in place by snap-on ring 116.

Fig. 2W displays connector 112 secured on connector 114 by two other connectors 116 and 118.

Fig. 3A displays a bottle with permanently attached connectors mounted thereon.

Bottle 12 is shown with connectors 130 in the form of female-threaded cylinders permanently adhered to its surface. The side of connector 130 which is attached to the bottle face is curved in compliance with the local bottle-face curvature as can be seen in the cross-section Figs. 3B and 3C. A suitable double-sided adhesive tape can be utilized to permanently attach connector 130 to the face of bottle 12. Other connecting means such as liquid adhesive or paste, or mechanical connecting pins 131 as displayed in Fig. 3B are also usable.

The outer side of connector 130 comprises, for example, a female-threaded hole 132 (Fig. 3B) adapted to a bottleneck thread or a cylindrical hole with a smooth interior surface which enables insertion of a bottle cap at a suitable press-fit to within the female-threaded hole, or a male-threaded rod adapted for attachment to other connectors.

Figs. 4A and 4B are a cross-section profile view and a top view, respectively, of an alternative embodiment of a connector. Two connectors 136 are pivotally connected by pivot 137 with an option to connect additional elements at pivoting axes 139. This arrangement can be extended indefinitely into an open or closed structure. The connectors 136 can be optionally pivotally connected also at their base (not shown).

Figs. 5A and 5B are a cross-section profile view and a top view, respectively, of a board connector with various connected elements mounted thereon.

Connector 148 in the form of a large perforated board 150 with female-threaded perforations 151 populating its face, enables attachment of bottles 12 having threaded necks 14. The board 150 is also populated with larger, smooth-sided holes 154 suitable for insertion of cans 156. This embodiment enables formation of letters, words, pictures, etc. such as the outline of a house displayed. The board 150 can be positioned vertically or horizontally or inclined. The board 150 can be used on one side or both sides.

Figs. 6A and 6B are top and profile views, respectively, of a further alternative embodiment of a connector.

Connector 160 is shaped as a regular symmetric polyhedron. Connector 160 may also be formed and shaped as a disc or any other shape, which supports flexible connecting arms 162. The flexible arms 162 can be springs, threaded permanently into female threads, as displayed, or threaded on male threads. Alternatively, flexible arms 162 can be rubber arms that are threaded into the thread holes or adhered into smooth

holes or connected mechanically by any suitable means.

Each of the flexible arms 162 comprises a female-threaded end 166, which can be replaced by the spring-end itself, which are shown to carry bottles 12.

When bent, the springs are designed to create sufficient force that, up to a limit, forces back the connected elements 12 to their original relative equilibrium position after being forcibly shifted from original equilibrium. With such springy connectors, flexible structures can be composed.

Fig. 7 is a cross-section view of yet another embodiment of the invention. A passive connector 170 enables linear sliding, and rotary movement of another connector 172. Bottles 12 are supported by bottles 19, which form part of a larger structure.

Figs. 8 to 10 illustrate various structures formed by use of the connectors and connected elements of the present invention.

Figs. 8A and 8B display two symmetric arrangements 180 and 182 comprising bottles 12, disposed in parallel and connected by connector 184 and connected elements 186 in the form of beverage cans that are press fitted into matching holes in connectors 188. A passive connector 190 in the form of a large rotary-mounted disk serves as a wheel, which together with the remainder of the structure imitates a wheelbarrow. The handles are two rod-like connectors 192. The enlarged section 8C is illustrated in Fig. 8C displaying a connector 188 housing a can 186.

The wheelbarrow is an example of a transportable structure, which can be wheeled as a whole from one place to another.

Figs. 9A to 9C illustrate a connector 200 rotatably mounted on another connector 202. Connector 200 supports four bottles 12. Bottles 19 support the connectors 204, forming a stable structure. A plate 206 perforated by female threads (not shown) supports the structure. Figs. 9A to 9C display accordingly a structure, which imitates a windmill or an airplane, which demonstrates a rotary section of a structure, which rotates with respect to the other structural elements.

Fig. 10 displays two windmill-like structures connected by an endless belt 210 which runs on two passive elements 212 in the form of two belt pulleys. With the belt 210 properly tensed, the rotating movement of one windmill rotates the other windmill. This is an example of two stationary independent structures, dynamically connected.

It is clear to those skilled in the art that other connectors which, for example, imitate various stationary or moving machine parts or stationary construction elements can be employed within the scope of the invention to enable the erection of complicated structures with complicated relative movements of connectors and connected elements.

As displayed in Fig. 10 belts and belt pulleys or engagement gears or any other engagement means known to those skilled in the art, when properly assembled and connected, will create complicated interconnected movements within the same structure or in another, separate structure, wherein a movement of an element or substructure in one structure brings about the movement of an element or substructure in the other structure.

By providing connectors of different colors and by using connected elements of different colors and sizes and/or by painting the connected elements, playing becomes more interesting which further activates artistic capabilities in addition to activating the motor capabilities. The various parts of the structure can also be identified by color-coding, alpha-numeric identification, geometric differentiation (different shapes or sizes), tactile differentiation (different textures, etc.), and/or any combination thereof.

While referring to bottles with threaded necks it should be clear to those familiar with the art that containers other than bottles with threaded necks can be associated by applying suitable and adaptable connectors.

The operating methods of the invention are described in association with basic connectors in their basic form. It should now be clear to those skilled in the art that the connectors can be further refined, perfected and optimized by applying techniques and expertise from various fields such as: finite-element software and/or value engineering methods to reduce for example the cost and weight of the connectors, to increase the safety in compliance with safety codes, to shape the connectors aesthetically and interestingly, to enhance the children's motor skills and stimulate cognitive abilities, to adapt the connectors to the capability of specific age groups, and the like.

Although not specifically described, discarded objects with different threads or different attachment means can also be integrated into the system by associating them with suitable connectors.

Any non-discarded object, which is associated with the system, is defined as a

passive element.

The system can be associated with suitable and relevant hardware and software, as is known to those skilled in the art, which will enable children to design, at various levels of interactivity, complication, automation and autonomy, various structures and to virtually operate them.

In general, whenever it is possible and beneficial, a user can interactively use appropriate software as is known to those skilled in the art. The program imitates, as far as possible, the actual construction of a structure either interactively, automatically or any in-between combination thereof.

Solid-drawing software with all its relevant options backed up by a large data base which includes all relevant data regarding the structured elements, is used to present the connector and connected elements, statically or dynamically in the clearest ways to the user, with the user enabled to select the desired presentation mode.

The user can position any connector or connected element in any desired position in space and connect it or connect to it other connector(s) or connected element(s). The software will match each connector or connected element as is performed in reality or will instruct the user to use a suitable connector or connected element or a plurality thereof.

The operating instructions are transferred in a way which is easily handled by a child via a touch screen, or voice recognition system, which is capable of identifying vocal commands.

Dismantling of a connector or a connected element is also enabled by simple procedures at any stage and may be performed manually without the use of tools.

Turning any element as well as the assembled structure in space is enabled at any stage.

The system of the invention allows for use of software having virtual entities which are integrated statically, passively, or actively dynamically into the structure, for example a virtual person pushing the wheelbarrow, or a virtual horse pulling a carriage.

The system is, moreover, adaptable to any procedure enabled by software, as is known to those skilled in the art, including for example: painting, shadowing, animating, embedding voice, providing relative and absolute movement of structure parts or

structures which are virtually enabled, and the like.

The system is further adaptable to any procedure available and created through the use of artificial intelligence which is capable of learning the user's capabilities and adapting itself to a user, such as a child.

The system of the invention, in an embodiment thereof (not illustrated), is provided with an identifying means, which identifies each child and saves all his/her activities in a database, which is then usable by the child or by others to analyze the child's skills and cognitive abilities.

Assisted by a database with detailed data regarding all the structured elements and information stored on structures created by the children, the use of appropriate software as is known to those skilled in the art enables any desired algorithm, passively or interactively, randomly or according to specific algorithms, to design different structures which are predefined or randomly generated identically to those in actual, real-life construction.

The system is further enriched, in other embodiments thereof, by providing structures which are animated, *i.e.*, move, drive, fly talk run, and the like, imitating a person or any element or object and which are integrated into cartoons or animated computer games and programs.

It should be clear that only limited examples, options, and methods regarding the association of software in the system are mentioned and those examples should be regarded in a broader aspect to include any relevant option suitable to be integrated into the software and hardware utilized by the children. The software, or software means, may comprise one or more applications selected from the group: CAD software, database applications, artificial intelligence software, voice application, animation, and any combination thereof.

Having described the invention with regard to certain specific embodiments, it is to be understood that the description is not meant as a limitation, since further modifications may now suggest themselves to those skilled in the art, and it is intended to cover such modifications as fall within the scope of the appended claims.